10/628,296

## **WEST Search History**

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DATE: Friday, February 24, 2006

Hide?	Set Name	Query	Hit Count
	DB=PGP	B,USPT; THES=ASSIGNEE; PLUR=YES	S; OP=ADJ
Γ	L1	allergen	8334
П	L2	L1 and pollen	2216
Γ.,	L3	L2 and (transgenic or transform?)	546
Γ	L4	L3 and lol	42
Γ	L5	L4 and expansin	4
	L7	13 and (lol p 3 or lol p III)	7

END OF SEARCH HISTORY

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                 2006 MeSH terms loaded for MEDLINE file segment of TOXCENTER
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                 CA/CAplus to be enhanced with updated IPC codes
NEWS
         DEC 21
                 IPC search and display fields enhanced in CA/CAplus with the
                 IPC reform
NEWS 8
         DEC 23
                 New IPC8 SEARCH, DISPLAY, and SELECT fields in USPATFULL/
                 USPAT2
                 IPC 8 searching in IFIPAT, IFIUDB, and IFICDB
New IPC 8 SEARCH, DISPLAY, and SELECT enhancements added to
NEWS 9
         JAN 13
NEWS 10
         JAN 13
                 INPADOC
NEWS 11
         JAN 17
                 Pre-1988 INPI data added to MARPAT
         JAN 17
                 IPC 8 in the WPI family of databases including WPIFV
NEWS 12
         JAN 30
                 Saved answer limit increased
NEWS 13
         JAN 31
                 Monthly current-awareness alert (SDI) frequency
NEWS 14
                 added to TULSA
                 STN AnaVist, Version 1.1, lets you share your STN AnaVist
NEWS 15
         FEB 21
                 visualization results
         FEB 22
                 Status of current WO (PCT) information on STN
NEWS 16
NEWS 17
         FEB 22
                 The IPC thesaurus added to additional patent databases on STN
NEWS 18
         FEB 22
                 Updates in EPFULL; IPC 8 enhancements added
NEWS EXPRESS
              FEBRUARY 15 CURRENT VERSION FOR WINDOWS IS V8.01a,
              CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
              AND CURRENT DISCOVER FILE IS DATED 19 DECEMBER 2005.
              V8.0 AND V8.01 USERS CAN OBTAIN THE UPGRADE TO V8.01a AT
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=> file agricola caplus biosis
COST IN U.S. DOLLARS
                                                 SINCE FILE
                                                                 TOTAL
                                                     ENTRY
                                                               SESSION
FULL ESTIMATED COST
                                                       0.21
                                                                  0.21
FILE 'AGRICOLA' ENTERED AT 10:21:12 ON 24 FEB 2006
FILE 'CAPLUS' ENTERED AT 10:21:12 ON 24 FEB 2006
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FILE 'BIOSIS' ENTERED AT 10:21:12 ON 24 FEB 2006
Copyright (c) 2006 The Thomson Corporation
=> s (2/3 allergen or allergen)
MISSING OPERATOR
=> s 2/3 allergen or allergen
MISSING OPERATOR
=> s allergen
     47903 ALLERGEN
T.1
=> s pollen
        85128 POLLEN
L2
=> s expansin
       713 EXPANSIN
=> s (transgenic or transform?)
     1017224 (TRANSGENIC OR TRANSFORM?)
=> s (11 and 12 and 13 and 14)
             1 (L1 AND L2 AND L3 AND L4)
=> s 11 and 14
         1037 L1 AND L4
=> s 11 and 12 and 13
            42 L1 AND L2 AND L3
=> s 11 and 12 and 14
          130 L1 AND L2 AND L4
=> dup rem 18
PROCESSING COMPLETED FOR L8
            107 DUP REM L8 (23 DUPLICATES REMOVED)
L9
=> s lol
           498 LOL
L10
```

=> s lol p?

TERM 'P?' EXCEEDED TRUNCATION LIMITS - SEARCH ENDED

TERM 'P?' EXCEEDED TRUNCATION LIMITS - SEARCH ENDED

TERM 'P?' EXCEEDED TRUNCATION LIMITS - SEARCH ENDED

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=> end
ALL L# QUERIES AND ANSWER SETS ARE DELETED AT LOGOFF
LOGOFF? (Y)/N/HOLD:
LOGOFF? (Y)/N/HOLD:
LOGOFF? (Y)/N/HOLD:
LOGOFF? (Y)/N/HOLD:n
=> d his
     (FILE 'HOME' ENTERED AT 10:20:52 ON 24 FEB 2006)
     FILE 'AGRICOLA, CAPLUS, BIOSIS' ENTERED AT 10:21:12 ON 24 FEB 2006
T.1
          47903 S ALLERGEN
L2
          85128 S POLLEN
L3
            713 S EXPANSIN
L4
        1017224 S (TRANSGENIC OR TRANSFORM?)
L5
              1 S (L1 AND L2 AND L3 AND L4)
L6
           1037 S L1 AND L4
L7
             42 S L1 AND L2 AND L3
L8
            130 S L1 AND L2 AND L4
            107 DUP REM L8 (23 DUPLICATES REMOVED)
L9
L10
            498 S LOL
=> s lol?
         29481 LOL?
L11
=> s (lol p I or lol p II or lol p III or lol p 1 or lol p 2 or lol p 3)
           234 (LOL P I OR LOL P II OR LOL P III OR LOL P 1 OR LOL P 2 OR LOL
               P 3)
=> s (11 and 12 and 14 and 110)
            12 (L1 AND L2 AND L4 AND L10)
=> dup rem 113
PROCESSING COMPLETED FOR L13
              8 DUP REM L13 (4 DUPLICATES REMOVED)
=> d 114 1-8 ab
L14 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN
     The present invention provides nucleic acids and polypeptide sequences for
AB
     a novel class of expansin-related proteins, designated group 2/3
     allergen, which comprise the group 2 and group 3 allergens
     from grass, a purified group 3 allergen Lol p 3, and
     method of using the nucleic acids sequences and proteins of the invention.
     Group 2/3 allergens of the invention are significant
     wall-loosening agents. They are capable of altering cell wall properties, which may effect growth, flexibility, and mech. strength in tissues in
     which they are expressed.
L14 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 1
     Ryegrass pollen (Lolium species) is a widespread source of
AB
     airborne allergens and is a major cause of hayfever and seasonal
     allergic asthma, which affect approx. 25% of the population in cool
     temperate climates. The main allergens of ryegrass
     pollen are the proteins Lol p 1 and Lol p 2.
     These proteins belong to two major classes of grass pollen
     allergens to which over 90% of pollen-allergic patients
     are sensitive. The functional role in planta of these pollen
     allergen proteins remains largely unknown. Here we describe the
```

generation and anal. of transgenic plants with reduced levels of the main ryegrass pollen allergens, Lol p 1 and Lol p 2, in the most important worldwide cultivated ryegrass species, L. perenne and L. multiflorum. These transgenic plants will allow the study of the functional role in planta of these pollen proteins and the determination of potential for development of hypo-allergenic ryegrass cultivars.

- L14 ANSWER 3 OF 8 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN AΒ Grass allergy is a world wide problem and perennial ryegrass, Loluim perenne, is a major cause of it. Human allergic responses to Lol p 1, p 2, and p 3 antigens are associated with HLA. We investigated the role of HLA-DQ molecules in ryegrass allergy using transgenic mice expressing DQ6 and DQ8 genes in Class II deficient mice. To identify DQ-restricted T cell epitopes on the Lol p 3, mice were immunized and LNC were challenged with peptides spanning the allergen. We have found that DQ6 and DQ8 mice recognize different epitopes. Primed with ryegrass extract, DQ6 mice responded robustly to peptide 11-30 and moderately to peptide 1-20 and four determinants at the carboxyl terminus. Mice were actively sensitized and challenged with allergen via the airways. Both DQ6 and DQ8 mice developed pulmonary eosinophilia and Th2 type cytokines. Intranasal challenge with naturally processed epitopes elicited significant BAL eosinophilia as opposed to the nonstimulatory peptides. The use of transgenic mice to determine the HLA restriction of the allergen specific T cell response will aid us in understanding their involvement in the regulation of the allergic response and development of new treatment strategies.
- L14 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 2 AΒ Hay fever and allergic asthma triggered by grass pollen allergens affect .apprx.20% of the population in cool temperate climates. Ryegrass is the dominant source of allergens due to its prodigious airborne pollen production Lol p 5 or group 5 is among the most important and widespread grass pollen allergen because it reacts with IgE antibodies of more than 90% of grass pollen-allergic patients, contains most of the grass pollen-specific IgE epitopes and elicits strong biol. responses. Significant efforts have been made in developing diagnostic and therapeutic reagents for designing new and more effective immunotherapeutic strategies for treatment of allergic diseases. An alternative approach to this problem could be to reduce the amount of allergen content in the source plant. High velocity microprojectile bombardment was used to genetically engineer ryegrass. Antisense construct targeted to one of major allergen, Lol p 5, was introduced. The expression of antisense RNA was regulated by a pollen-specific promoter. Pollen was analyzed for IgE reactivity. Anal. of proteins with allergen -specific monoclonal and polyclonal antibodies did not detect Lol p 5 in the transgenic pollen. The transgenic pollen showed remarkably reduced allergenicity as reflected by low IgE binding capacity of pollen extract as compared to control pollen. The transgenic ryegrass plants in which Lol p 5 gene expression is perturbed showed normal fertile pollen development. Our studies showed that it is possible to selectively "switch off" allergen production in pollen of ryegrass demonstrating feasibility of genetic engineering of plants for reduced allergenicity.
- L14 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN

  AB The present invention discloses transgenic plants expressing therapeutically active proteins, preferably from their plastid genome or targeted to the vacuole. The present invention also describes the administration of such transgenic plants to a host in need

thereof for the prevention or treatment of diseases. In a preferred embodiment, such plants or matter derived from such plants is administered orally to a host. Thus, allergen expression vectors for tobacco plastids are prepared

- L14 ANSWER 6 OF 8 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.

  (2006) on STN DUPLICATE 3
- Type 1 allergic reactions, such as hay fever and allergic asthma, AB triggered by grass pollen allergens are a global health problem that affects approximately equal to 20% of the population in cool, temperate climates. Ryegrass is the dominant source of allergens because of its prodigious production of airborne pollen. Lol p 5 is the major allergenic protein of ryegrass pollen, judging from the fact that almost all of the individuals allergic to grass pollen show presence of serum IgE antibodies against this protein. Moreover, nearly two-thirds of the IgE reactivity of ryegrass pollen has been attributed to this protein. Therefore, it can be expected that down-regulation of Lol p 5 production can significantly reduce the allergic potential of ryegrass pollen. Here, we report down-regulation of Lol p 5 with an antisense construct targeted to the Lol p 5 gene in ryegrass. The expression of antisense RNA was regulated by a pollen -specific promoter. Immunoblot analysis of proteins with allergen -specific antibodies did not detect Lol p 5 in the transgenic pollen. The transgenic pollen showed remarkably reduced allergenicity as reflected by low IgE binding capacity of pollen extract as compared with that of control pollen. The transgenic ryegrass plants in which Lol p 5 gene expression is perturbed showed normal fertile pollen development, indicating that genetic engineering of hypoallergenic grass plants is possible.
- The present invention relates generally to transgenic grass and to a method of producing same. More particularly, the present invention is directed to transgenic grass of the group Monocotyledoneae. The transgenic grass of the present invention exhibits the potential to express a range of beneficial traits such as reduced allergenicity, enhanced nutritional content and increased disease resistance. The transgenic grass is regenerated from a callus, the cells of which are subjected to microparticle bombardment and/or Agrobacterium-mediated transfer of genetic material. The callus is subjected to transformation and regeneration on a solid support. Regeneration comprises culturing transformed cells in medium

containing rooting and shooting hormones and then culturing the resulting

L14 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN

shoots on a medium in the absence of hormones.

L14 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN
AB The cDNA is presented encoding the major allergenic protein Lol pI from pollen of ryegrass, Lolium perenne, and to derivs. and homologs thereof and to immunol.-related allergenic proteins. The promoter for Lol pI and expression vectors comprising the promoter are also provided. The method for cloning the cDNA comprises the steps of (1) extracting RNA from ryegrass pollen, and selecting poly(A)+ mRNA by affinity chromatog. to serve as a template for synthesis of single-stranded cDNA, (2) synthesizing and isolating double-stranded cDNA, (3) constructing a λgtll cDNA expression library, (4) screening the library after induction with IPTG using monoclonal antibodies reactive with the allergenic protein from Lolium perenne to probe duplicate filter lifts and identifying and isolating pos. phage plaques, (5) plating the plaques at low d. and conducting duplicate filter lifts of the plaques, (6) screening the phage plaques containing clones

producing protein allergen by incubation with monoclonal antibodies, (7) recovering the cDNA insert form allergic antisera and antibody pos. phage, and (8) inserting the inserts into a plasmid vector for sequencing and expression. The cDNA sequence can be used for pollen-specific expression, as a method of inhibiting pollen development or function and inducing nuclear male sterility, and for immunotherapy of allergy.

## => d his

(FILE 'HOME' ENTERED AT 10:20:52 ON 24 FEB 2006)

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FILE 'AGRICOLA, CAPLUS, BIOSIS' ENTERED AT 10:21:12 ON 24 FEB 2006
L1
          47903 S ALLERGEN
L2
          85128 S POLLEN
L3
            713 S EXPANSIN
L4
        1017224 S (TRANSGENIC OR TRANSFORM?)
              1 S (L1 AND L2 AND L3 AND L4)
L5
L6
           1037 S L1 AND L4
L7
             42 S L1 AND L2 AND L3
L8
            130 S L1 AND L2 AND L4
L9
            107 DUP REM L8 (23 DUPLICATES REMOVED)
L10
            498 S LOL
          29481 S LOL?
L11
            234 S (LOL P I OR LOL P II OR LOL P III OR LOL P 1 OR LOL P 2 OR LO
L12
             12 S (L1 AND L2 AND L4 AND L10)
L13
L14
              8 DUP REM L13 (4 DUPLICATES REMOVED)
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## => d 17 1-42 ti

- L7 ANSWER 1 OF 42 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2006) on STN
- TI Purification and characterization of four beta-expansins (Zea m 1 isoforms) from maize pollen.
- L7 ANSWER 2 OF 42 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2006) on STN
- TI Expansin-like molecules: novel functions derived from common domains.
- L7 ANSWER 3 OF 42 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2006) on STN
- TI Pollination modulates expression of the PPAL gene, a pistil-specific betaexpansin.
- L7 ANSWER 4 OF 42 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2006) on STN
- TI Grass group I pollen allergens (beta-expansins ) lack proteinase activity and do not cause wall loosening via proteolysis.
- L7 ANSWER 5 OF 42 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2006) on STN

- TI Expression and processing of a hormonally regulated beta-expansin from soybean.
- L7 ANSWER 6 OF 42 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2006) on STN
- TI Cytokinin regulates the expression of a soybean beta-expansion gene by a post-transcriptional mechanism.
- L7 ANSWER 7 OF 42 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2006) on STN
- TI Group I allergens of grass pollen as cell wall-loosening agents.
- L7 ANSWER 8 OF 42 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Pollen allergens are restricted to few protein families and show distinct patterns of species distribution
- L7 ANSWER 9 OF 42 CAPLUS COPYRIGHT 2006 ACS on STN
- TI The expansin superfamily
- L7 ANSWER 10 OF 42 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Male-sterile mutation alters Zea m 1 ( $\beta$  expansin 1) accumulation in a maize mutant
- L7 ANSWER 11 OF 42 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Group 2/3 allergens of grass pollen with expansin-like cell wall-loosening activity for applications in paper, wood, textile and biofuel industries
- L7 ANSWER 12 OF 42 CAPLUS COPYRIGHT 2006 ACS on STN
- TI  $\beta$  expansins as cell wall loosening agents identified from Arabidopsis thaliana, compositions thereof and methods of use
- L7 ANSWER 13 OF 42 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Purification and characterization of four  $\beta\text{--}$  expansins (Zea m 1 isoforms) from maize pollen
- L7 ANSWER 14 OF 42 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Homology modeling of the cellulose-binding domain of a **pollen** allergen from rye grass: structural basis for the cellulose recognition and associated allergenic properties
- L7 ANSWER 15 OF 42 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Properties of group I allergens from grass pollen and their relation to cathepsin B, a member of the C1 family of cysteine proteinases
- L7 ANSWER 16 OF 42 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Pollination modulates expression of the PPAL gene, a pistil-specific  $\beta\text{-}$  expansin
- L7 ANSWER 17 OF 42 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Expansin-like molecules: novel functions derived from common domains
- L7 ANSWER 18 OF 42 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Antiserum against a stigma-exudate protein of tobacco, SE32, which was identical with PPAL, a  $\beta$  expansin-like protein specific to stigma, cross-reacted with another stigma-exudate protein, SE35

- L7 ANSWER 19 OF 42 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Grass group I pollen allergens ( $\beta$ -expansins) lack proteinase activity and do not cause wall loosening via proteolysis
- L7 ANSWER 20 OF 42 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Expression and processing of a hormonally regulated  $\beta$ -expansin from soybean
- L7 ANSWER 21 OF 42 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Grass group I allergens ( $\beta$  expansins) are novel, papain-related proteinases
- L7 ANSWER 22 OF 42 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Cytokinin regulates the expression of a soybean  $\beta$  expansin gene by a post-transcriptional mechanism
- L7 ANSWER 23 OF 42 CAPLUS COPYRIGHT 2006 ACS on STN
- TI Group I allergens of grass pollen as cell wall-loosening agents
- L7 ANSWER 24 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
- TI Nomenclature for members of the **expansin** superfamily of genes and proteins.
- L7 ANSWER 25 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
- TI Male-sterile mutation alters Zea m 1 (beta-expansin 1) accumulation in a maize mutant.
- L7 ANSWER 26 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
- TI Plant allergic proteins and their biological functions.
- L7 ANSWER 27 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
- TI Purification and characterization of four beta-expansins (Zea m 1 isoforms) from maize pollen.
- L7 ANSWER 28 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
- TI Further analysis of pollen beta-expansins (group-1 allergens): Evolutionary distribution and synergy with cellulases.
- L7 ANSWER 29 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
- TI Purification and characterization of four beta-expansins (Zea m I) from maize pollen.
- L7 ANSWER 30 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN  $\,$
- TI beta-Expansins (grass pollen group 1 allergens ) lack protease activity.
- L7 ANSWER 31 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN  $\,$
- TI Wall sensitivity to, and expression of, pollen betaexpansins in the monocotyledons.
- L7 ANSWER 32 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
- TI Analysis of maize group-1 pollen allergen, Zea m1.

- L7 ANSWER 33 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
- TI Homology modeling of the cellulose-binding domain of a **pollen** allergen from rye grass: Structural basis for the cellulose recognition and associated allergenic properties.
- L7 ANSWER 34 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
- TI Properties of group I allergens from grass pollen and their relation to cathepsin B, a member of the C1 family of cysteine proteinases.
- L7 ANSWER 35 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
- TI Pollination modulates expression of the PPAL gene, a pistil-specific betaexpansin.
- L7 ANSWER 36 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
- TI **Expansin**-like molecules: Novel functions derived from common domains.
- L7 ANSWER 37 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
- TI Antiserum against a stigma-exudate protein of tobacco, SE32, which was identical with PPAL, a beta-expansin-like protein specific to stigma, cross-reacted with another stigma-exudate protein, SE35.
- L7 ANSWER 38 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
- TI Grass group I pollen allergens (beta-expansins ) lack proteinase activity and do not cause wall loosening via proteolysis.
- L7 ANSWER 39 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
- TI Expression and processing of a hormonally regulated beta-expansin from soybean.
- L7 ANSWER 40 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
- TI Grass group I allergens (beta-expansins) are novel, papain-related proteinases.
- L7 ANSWER 41 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
- TI Cytokinin regulates the expression of a soybean beta-expansin gene by a post-transcriptional mechanism.
- L7 ANSWER 42 OF 42 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
- TI Group I allergens of grass pollen as cell wall-loosening agents.

## => d his

(FILE 'HOME' ENTERED AT 10:20:52 ON 24 FEB 2006)

FILE 'AGRICOLA, CAPLUS, BIOSIS' ENTERED AT 10:21:12 ON 24 FEB 2006

- L1 47903 S ALLERGEN
- L2 85128 S POLLEN
- L3 713 S EXPANSIN
- L4 1017224 S (TRANSGENIC OR TRANSFORM?)

L5	1 S (L1 AND L2 AND L3 AND L4)
L6	1037 S L1 AND L4
L7	42 S L1 AND L2 AND L3
L8	130 S L1 AND L2 AND L4
L9	107 DUP REM L8 (23 DUPLICATES REMOVED)
L10	498 S LOL
L11	29481 S LOL?
L12	234 S (LOL P I OR LOL P II OR LOL P III OR LOL P 1 OR LOL P 2 OR LO
L13	12 S (L1 AND L2 AND L4 AND L10)
L14	8 DUP REM L13 (4 DUPLICATES REMOVED)

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